WHAT IS CLAIMED IS:

1. A system for decoupling a fan of a turbojet, the turbojet including a moving fan shaft mounted on bearings each connected to a stationary structure of the turbojet by bearing supports, said bearing supports being fixed to said stationary structure of the turbojet via mechanical links serving, during normal operation of the turbojet, to transmit the forces generated by rotation of the fan, wherein said mechanical links include explosive charges enabling said links to be broken, said explosive charges being controlled by a full authority digital engine control computer on the basis of means for measuring the mechanical stresses in the turbojet and of a computer model simulating the static, dynamic, and thermodynamic behavior of the turbojet.

2. A decoupling system according to claim 1, including a computer connected to the measurement means to obtain a representation of the static, dynamic, and thermodynamic behavior of the turbojet as a function of a model of said behavior and as a function of said measurements of mechanical stresses of the turbojet, said computer being connected to said FADEC computer to cause said links to break as a function of said static, dynamic, and thermodynamic behavior of the turbojet.

3. A decoupling system according to claim 1, wherein each of said explosive charges includes a detonator integrated in said mechanical link.

4. A decoupling system according to claim 3, wherein said detonators are electrically controlled.

5. A decoupling system according to claim 3, wherein said detonators are optically controlled.

6. A decoupling system according to claim 1, wherein said explosive charges are explosive powders.

7. A decoupling system according to claim 1, wherein said explosive charges are capsules of gas under pressure.

8. A decoupling system according to claim 1, wherein said means for measuring mechanical stresses of the engine comprise one or more of the following sensors: pressure sensors; temperature sensors; displacement sensors; and vibration sensors.